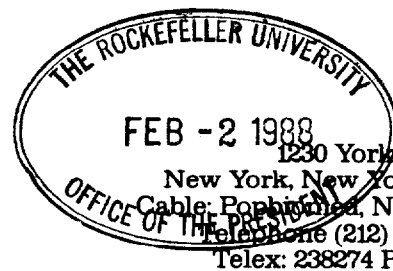


# The Population Council

Center for  
Biomedical Research



January 25, 1988

Joshua Lederberg  
The Rockefeller University  
New York, New York 10021-6399

Dear Josh:

Thank you for sending me your presentation on "The Second Century of Louis Pasteur: A Global Agenda for Biomedical Research". I was certainly stirred by your remarks. Your ideas coincide with many of my own. There is certainly an astounding amount of things to be done in the world and it is exciting to be involved in some of them.

Regarding the questions in your note:

Isolated Germ cells cannot be cultured separate from the seminiferous epithelium. Segments of the epithelium, however, can be cultured for several weeks in the absence of hormones. Sperm cells per se are terminally differentiated; however, virtually all gonidia are in the chain of differentiation prior to the formation of flagella can divide to form precursor cells for numerous spermatozoa. The extent to which nuclei of immature gonidia are capable of fertilization is not known. I am afraid that our state of knowledge regarding the nature of germ cells prior to terminal differentiation is so sketchy that we cannot answer the dilemma that you pose on page 5 of your manuscript.

Best wishes.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "C. Wayne Bardin".

C. Wayne Bardin, M.D.  
Director

CWB:lg

Jan 28

We enjoyed the visit last night  
CB